

## WHAT IS CLAIMED IS:

1. A liquid container comprising:
  - an accommodation portion to define a liquid
  - 5 accommodation space;
  - a liquid supply portion to supply a liquid
  - accommodated in the accommodation space to an outside;
  - a mechanism to maintain or expand a volume of the
  - accommodation space; and
  - 10 a one-way valve to allow an introduction of a gas
  - from the outside into the accommodation space and
  - prevent the liquid and gas from flowing out of the
  - accommodation space to the outside;
  - wherein the one-way valve includes: a flexible
  - 15 sheet situated between a first chamber on the
  - accommodation space side and a second chamber on the
  - outside and having an area to secure a predetermined
  - level of freedom of deflection; and a valve mechanism
  - to perform an open-close operation accompanied by a
  - 20 deflection of the flexible sheet, the degree of the
  - flexible sheet deflection conforming to a pressure
  - difference between the first chamber and the second
  - chamber;
  - wherein the area of the flexible sheet is formed
  - 25 with an undulated portion whose undulated form is
  - maintained in at least an operation range of the valve
  - mechanism.

2. A liquid container according to claim 1,  
wherein the area of the flexible sheet is formed with  
an undulated portion, the undulated portion rising or  
5 a sinking toward the first chamber side or second  
chamber side.

3. A liquid container according to claim 1,  
wherein the flexible sheet is formed of a resin member  
10 or resin sheet.

4. A liquid container according to claim 1,  
wherein the valve mechanism includes a valve closing  
member attached to the flexible sheet, a seal member  
15 provided at a predetermined position to oppose the  
valve closing member, and a biasing member urging the  
seal member in a direction opposing the valve closing  
member;

wherein the valve closing member has an opening  
20 communicating the first chamber and the second chamber  
with each other;

wherein the seal member opens or closes the opening  
as the valve closing member moves accompanied by a  
deflection of the flexible sheet.

25

5. A liquid container according to claim 1,  
wherein the area of the flexible sheet is situated

along a circumference of the valve closing member.

6. An ink tank accommodating ink as a liquid in the liquid container of claim 1.

5

7. An ink jet cartridge having the ink tank of claim 6 and an ink jet print head to eject ink.

8. An ink jet printing apparatus for printing an  
10 image by using the ink tank of claim 6 and an ink jet print head to eject ink and by ejecting ink supplied from the ink tank from the ink jet print head.

9. A one-way valve for allowing a fluid to move  
15 from a first chamber on one side of a path to a second chamber on the other side and blocking the fluid from moving from the second chamber to the first chamber, the one-way valve comprising:

a flexible sheet situated between the first chamber  
20 and the second chamber and having an area to secure a predetermined level of freedom of deflection; and

a valve mechanism to perform an open-close operation accompanied by a deflection of the flexible sheet, the degree of the flexible sheet deflection  
25 conforming to a pressure difference between the first chamber and the second chamber;

wherein the area of the flexible sheet is formed

with an undulated portion whose undulated form is maintained in at least an operation range of the valve mechanism.

5        10. A method of manufacturing a liquid container,  
wherein the liquid container includes: an  
accommodation portion to define a liquid accommodation  
space; a liquid supply portion to supply a liquid  
accommodated in the accommodation space to an outside;  
10 a mechanism to maintain or expand a volume of the  
accommodation space; and a one-way valve to allow an  
introduction of a gas from the outside into the  
accommodation space and prevent the liquid and gas  
from flowing out of the accommodation space to the  
15 outside;

wherein the one-way valve includes: a flexible  
sheet situated between a first chamber on the  
accommodation space side and a second chamber on the  
outside and having an area to secure a predetermined  
20 level of freedom of deflection; and a valve mechanism  
to perform an open-close operation accompanied by a  
deflection of the flexible sheet, the degree of the  
flexible sheet deflection conforming to a pressure  
difference between the first chamber and the second  
25 chamber;

the method comprising:

a step of, before or after the flexible sheet is

assembled into the one-way valve, forming in the area of the flexible sheet an undulated portion whose undulated form is maintained in at least an operation range of the valve mechanism.

5

11. A method of manufacturing a liquid container according to claim 10, further including:

a step of forming the undulated portion in the area of the flexible sheet before the flexible sheet is  
10 assembled into the one-way valve; and

a step of, when the flexible sheet formed with the undulated portion is assembled into the one-way valve, setting an assembly attitude of the flexible sheet so that the undulated form of the undulated portion can  
15 be maintained in at least a deflection range of the flexible sheet as the valve mechanism performs an open-close operation.

12. A method of manufacturing a liquid container  
20 according to claim 10, further including:

a step of assembling into the one-way valve the flexible sheet not formed with the undulated portion in the area of the flexible sheet; and

a step of forming the undulated portion in the area  
25 of the flexible sheet after the flexible sheet is assembled into the one-way valve.

13. A method of manufacturing a liquid container according to claim 10, further including:

a step of, after preparing the liquid container provided with the one-way valve, injecting a liquid  
5 into the accommodation portion.